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Amendments to the Drawings:

The attached sheet of drawings includes changes to FIG. 1. This sheet, which includes FIG. 1, replaces the original sheet including FIG. 1. In Figure 1, "prior art" has been added.

Attachement: Replacement Sheeet

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Claims 1-54 are pending in the present application. In the above amendments, claims 1, 2, 3, 5, 6, 7, 8, 9, 10, 12-22, 24, 25, 28, 30, 36-39, 43, 45, 47, 49-54 have been amended. Claim 35 has been canceled. Applicant respectfully requests reconsideration in view of the following.

Allowable Subject Matter

Claims 6-7, 10, 12, 13, 19, 20, 22, 24, 25, 33, 34, 36, 39 48-50, 52 and 53 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claims and any intervening claims.

Claim Objections

Claims 1-7, 9, 10, 12-25, 28, 30, 34, 38, 43, 45, 49 and 52 are objected to because of the following informalities:

Claim 1 line 5 delete typo "as second" and insert – a second.

Claim 2 line 2 the words "a plurality of buffers" and "an first code" seem to refer back to a "plurality of buffers" and "a first code."

Claims 3 and 9 line 2 the words "a plurality of buffers" seem to refer back to "plurality of buffers" recited in claims 1 and 8, line 3, respectively.

Claim 5 lines 1 and 3, claim 7 lines 1 and 3, and claim 10 lines 1-2 the words "a block of bits" seem to refer back to "a block of bits" recited in claims 4, 6 and 9 line 3, respectively.

Claim 6 lines 2 and 4 the words "an second code," "a set of frames" and "a second code" seem to refer back to "an second code" and "a set of frames" recited in claim 1 lines 5-6, respectively.

Claim 12 line 2 and claim 13 line 3 the words "a decoder" seem to refer back to "a decoder" recited in claim 8 line 2.

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Claim 14 line 3 and claim 15 line 3 before the word "buffer's" insert transmit as in claim 14 line 2 for consistency.

Claim 15 lines 2 and 3 change "a plurality" and "an first" to the plurality and the first.

Claim 16 lines 2 and 3 change "a plurality" and "a block" to the plurality and the block.

Claim 18 lines 1 and 3 change "a block" to the block.

Claim 19 lines 2 and 4 change "an second" and "a set" to the second and the set.

Claim 20 and 22 lines 1 and 3 and claims 38 and 49 line 3 change "a block" to the block.

Claim 21 line 2 change "a plurality" to the plurality.

Claim 25 line 3 change "an first" to the first.

Claims 28, 30, 43, and 45 line 1 delete typo "each of each of" and insert each of.

Claims 24 and 52 line 3 change "a block" to the block.

Claim 52 line 2 change "a buffer" to the buffer.

Appropriate correction to the claims above is made with the exception of claim 24. Applicants could not find the word "block" in claim 24.

Claim Rejections under 35 U.S.C. § 112

Claims 3, 7, 9-10, 12, 17-18, 20-22, 25, 36-39, 45, 47, 50-51, and 53-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 3, the Examiner states "[i]n claim 3 lines 1-2 which recite "wherein said encoding systematic bits in each of a plurality of buffers with a block code" lack clear antecedent basis because no "said encoding systematic bits in each of a plurality of buffers with a block code" have been previously recited in the claims and therefore the limitation is not clearly understood." Applicants amended claim 3 to depend from claim 2, which includes the limitation "said encoding systematic bits in each of a plurality of buffers with a block code" as recited in claim 2.

With respect to claims 7, 9 and 10 the Examiner states "[i]n claim 7 line 3, claim 9 lines 3 and 4 and claim 10 line 2, which recite "a buffer" is (sic) not clear whether and how it relates to the plurality of buffers of claims 1 and 8 line 3, respectively, and whether it is merely reciting one

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of the plurality of buffers.” Applicants amended claims 7, 9 and 10 to read “at least one of the plurality of buffers.”

With respect to claim 12, the Examiner states “[i]n claim 12 line 3 which recite (sic) “the buffer” lacks clear antecedent basis because no buffer have (sic) been previously recited in the claims and therefore the limitation is not clearly understood.” Applicants amended claim 12 to read “at least one of the plurality of buffers.”

With respect to claim 17, the Examiner states “[i]n claim 17 line 2 which recite (sic) “the plurality of first buffers” lack (sic) clear antecedent basis.” Applicants amended claim 17 to read “the plurality of the transmit buffers.”

With respect to claim 18, the Examiner states “[i]n claim 18 line 2 which recite (sic) “the transmitting buffer” lacks clear antecedent basis and is not clear as to whether it is reciting—one of the transmitting buffers— of claim 14 line 2.” Applicants amended claim 18 to read “at least one of the transmitting buffers.”

With respect to claims 20, 21, 22 and 25, the Examiner states “[i]n claim 20 line 3, claim 21 lines 3,4, claim 22 line 2 and claim 25 line 3 which recite “the buffer” lack clear antecedent basis.” Applicants amended claim 20 to read “at least one of the plurality of transmit buffers,” claim 21, 22 and 25 to read “at least one of the plurality of receive buffers.”

With respect to claims 36, 39, 50 and 53, the Examiner states “[i]n claims 36, 39, 50 and 53 line 1 which recite “[t]he method” lack clear antecedent basis. Applicants amended claims 36, 39, 50 and 53 to delete “method” and replace it with “apparatus.”

With respect to claims 37, 38, 39, 47, 51, 53 and 54, the Examiner states “[i]n claim 37 line 3, claim 38 line 2, claim 47 line 2, claim 51 line 3, claims 53, 54 line 3 which recite “the buffer,” “a buffer,” and “said buffer” lack clear antecedent basis and it is not clear as to whether they’re reciting on of the plurality of buffers of claim 35 line 4 and claim 41 line 2 and 10, respectively.” Applicants amended claims 37, 38 and 39 to read “at least one of the plurality of buffers.” Applicants amended claim 47 to read “at least one of the plurality of transmit buffers.” Applicants amended claims 51, 53 and 54 to read “at least one of the plurality of receive buffers.”

Accordingly, Applicants respectfully request the rejection of claims 3,7, 9-10, 12, 17-18, 20-22, 25, 36-39, 45, 47, 50-51, and 53-54 be withdrawn.

PATENT**Claim Rejections Under 35 U.S.C. § 102(b)**

Claims 1, 8, 14, 26, 35, and 41 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Greenblatt (5,136,586).

For anticipation under 35 U.S.C. §102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. (MPEP 706.02).

Applicant respectfully submits that Claim 1, 8, 14, 26, 36 and 41 are not anticipated by Greenblatt for the reasons set out below, and Applicants respectfully request reconsideration of Examiners rejection.

With respect to claim 1, Applicant's respectfully submit that claim 1 is not anticipated by Greenblatt, (5,136,586). In particular the claim fails to anticipate the following element of claim 1:

"encoding said multiplexed content with a second code to provide a set of frames."

Greenblatt discloses modem-encoded digital data segments D (from telecommunications device) as shown in Fig. 1. "[t]he modem-encoded digital data segments D are fed to the distant instrument telecommunications advice (sic)." (Greenblatt Col. 3, lines 26-28, Fig. 2 and Fig. 3). The modem-encoded digital data segments D that are input into the multiplexer are the same modem-encoded digital data segments D that are provided to the telecommunications device. (Greenblatt, Fig. 2 and Fig. 3).

In contrast, Applicants claim states "encoding said multiplexed content with a second code to provide a set of frames." Nowhere in Greenblatt is a second code disclosed.

In addition, Greenblatt discloses a "method underlying the invention operates by dividing time into a plurality of successive intervals or frames of standardized time duration T, with each frame containing a burst of each type of data..." (Greenblatt Col. 2, lines 2-4). "[d]uring the first portion of "Frame 2", this digitized audio voice signal consisting of the 800 sampled recorded during "Frame 1", is played back at "V" at some what higher rate than the 8 KHZ sampling rate, as measured in samples per second, so that the playback is completed before the end of "Frame 2". This leaves an unoccupied remainder in which to multiplex or insert a

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segment of the telecommunication device signal D encoded, as is well-known, in similar fashion to standard modem techniques, labelled (sic) MODEM-ENCODED DATA SEGMENTS D IN FIG. 2,...” (Greenblatt Col. 2, lines 54-63). In addition, Greenblatt discloses, “[t]hus, the voice communication samples recorded during period V are replayed at a faster rate during period V’, providing the interval D into which the digital data channel information is inserted.” (Greenblatt Col. 3, lines 1-5, Fig. 1). “A method and apparatus for telephone line multiplex channeling of toll-quality voice and modem-encoded digital data from telecommunication devices (FAX, computers, displays, printers, etc.) involving variably sample-compression of digitally converted voice signals within successive time frames, and *filling the resulting unoccupied time within each frame with the modem-encoded digital data...*” (Greenblatt, Abstract) Thus, Greenblatt is not encoding said multiplexed content with a second code to provide a set of frames, but rather inserting the digital data information into an already existing frame.

In contrast, Applicants claim states “encoding said multiplexed content with a second code to provide a set of frames.” Nowhere in Greenblatt is encoding the multiplexed content providing a set of frames, but rather using the existing frames to insert the multiplexed content.

Therefore, Greenblatt does not anticipate this limitation of claim 1, and Applicants respectfully request the rejection be withdrawn.

With respect to claims 8 and 14 Applicant’s respectfully submit that claims 8 and 14 are not anticipated by Greenblatt (5,136,586). In particular the claims fails to anticipate the following element of claims 8 and 14:

“decoding received frames by a second decoder;”

The reasons and explanations are set forth in the analysis of claim 1.

Therefore, Greenblatt does not anticipate this limitation of claims 8 and 14. Applicants respectfully request the rejection be withdrawn.

With respect to claim 26 Applicant’s respectfully submit that claim 26 is not anticipated by Greenblatt, (5,136,586). In particular the claim fails to anticipate the following element of claim 26:

“an inner encoder communicatively coupled to said multiplexer.”

Applicants have carefully reviewed Greenblatt and cannot find any reference to an inner encoder communicatively coupled to said multiplexer. Applicants also cannot find any implied

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or inherent inner encoder communicatively coupled to said multiplexer. Absent any showing of an inner encoder communicatively coupled to said multiplexer, Applicants submit Greenblatt fails to anticipate this limitation.

With respect to claim 35 claim 35 is canceled and claim 36 is amended to include the limitations of previous claim 35, as the Examiner stated claim 36 would be allowed if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph and to include the limitations of any intervening claims.

With respect to claim 41 Applicant's respectfully submit that claim 41 is not anticipated by Greenblatt, (5,136,586). In particular the claim fails to anticipate the following element of claim 41:

"an inner encoder communicatively coupled to said multiplexer."

Applicants have carefully reviewed Greenblatt and cannot find any reference to an inner encoder communicatively coupled to said multiplexer. Applicants also cannot find any implied inner encoder communicatively coupled to said multiplexer. Absent any showing of an inner encoder communicatively coupled to said multiplexer, Applicants submit Greenblatt fails to anticipate this limitation.

Thus, Applicants submit independent claims 1, 8, 14, 26, 35, and 41 are in a condition for allowance. Since claims 2-7 depend from independent claim 1 it follows that claims 2-7 are also in a condition for allowance. Since claims 9-13 depend from independent claim 8 it follows that claims 9-13 are also in a condition for allowance. Since claims 15-25 depend from independent claim 14 it follows that claims 15-25 are also in a condition for allowance. Since claims 27-34 depend from independent claim 26 it follows that claims 27-34 are also in a condition for allowance. Since claims 36-40 depend from independent claim 35 it follows that claims 36-40 are also in a condition for allowance. And, since claims 42-54 depend from independent claim 41 it follows that claims 42-54 are also in a condition for allowance.

35 U.S.C. § 103 (a)

Claims 2-5, 9, 11, 15-18, 21, 23, 27-32, 37-38, 40, 42-47, 51, and 54 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Greenblatt (5,136,586) in view of Naden et al. (6,560,206), hereafter referred to as Naden.

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To establish a *prima facie* case of obviousness, the prior art reference (or references when combined) must teach each or suggest all the claim limitations. "The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure". In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Applicant respectfully submits that Claims 2-5, 9, 11, 15-18, 21, 23, 27-32, 37-38, 40, 42-47, 51, and 54 are not rendered obvious by Naden (6,560,206), for the reasons and explanations set out below.

Since claims 2-5, 9, 11, 15-18, 21, 23, 27-32, 37-38, 40, 42-47, 51, and 54 all depend from independent claims which are now in a condition for allowance, it follows that claims 2-5, 9, 11, 15-18, 21, 23, 27-32, 37-38, 40, 42-47, 51, and 54 are also in a condition for allowance.

Applicants submit claims 1-34 and 36-54 are in a condition for allowance.

Drawings

Applicant submits that the above amendments to the drawings do not make any substantive changes or introduce any new material but are simply the correction of typographical errors, which are consistent with the specification as originally submitted. Therefore, approval and entry of the above amendments are respectfully requested.

PATENT**REQUEST FOR ALLOWANCE**

In view of the foregoing, Applicant submits that all pending claims in the application are patentable. Accordingly, reconsideration and allowance of this application is earnestly solicited. Should any issues remain unresolved, the Examiner is encouraged to telephone the undersigned at the number provided below.

Respectfully submitted,

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